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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,173	03/17/2005	Hiroyuki Inokawa	265563US6PCT	6489

22850 7590 12/29/2008

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EXAMINER	
CHOWDHURY, AFROZA Y	
ART UNIT	PAPER NUMBER
2629	

NOTIFICATION DATE	DELIVERY MODE
12/29/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/528,173	INOKAWA ET AL.	
	Examiner	Art Unit	
	AFROZA Y. CHOWDHURY	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *3,5,6-8,16 and 17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4 and 9-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/26/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on **September 30, 2008** has been entered. Claims 1-17 are currently pending. Claims 3, 5, 6-8, 16, and 17 are withdrawn from further consideration. Applicant's arguments are addressed herein below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, 4, and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Toda et al.** (US Pub. 2003/0146673).

As to claims 1, 14, and 15, Toda et al. discloses an input apparatus for detecting that the front surface of a panel is pressed or touched and inputting data corresponding to the detected result (abstract, [0012] – [0013]), comprising:

a flexible wiring board (fig 13) on which a pattern of predetermined electrodes is formed ([0018] – [0020]);

the piezoelectric actuator ((fig. 1(2)) on the flexible wiring board, wherein the piezoelectric actuator is configured to contact the panel (fog. 13, [0021]); and

electrically connecting wiring terminals formed at one end portion of the piezoelectric actuator and the predetermined electrodes formed on the flexible wiring board (fig. 1,5, [0031], [0081]).

Toda et al. does not explicitly teach a piezoelectric actuator, made of a piezoelectric bi-morph device, being configured to bridge a pair of through-holes in a flexible wiring board and a part of the flexible wiring board being formed between the pair of the through-holes and positioned on the upper surface of the piezoelectric actuator.

However, it is obvious to one skill in the art to recognize the conventional way of making a piezoelectric actuator made of a piezoelectric bi-morph device. Besides the flexible wiring board of the piezoelectric device of Toda et al. is formed and positioned on the upper surface of the piezoelectric actuator (see fig. 1, 13) little differently, but the flexible printed circuit does not easily peel off from the piezoelectric bodies ([0019] – [0021]) and it is well formed and positioned similar to Applicant's flexible wiring board that was formed using a pair of through-holes.

As to claim 2, Toda et al. discloses an input apparatus for detecting that the front surface of a panel is pressed or touched and inputting data corresponding to the detected result (abstract, [0012] – [0013]).

Toda et al. does not teach input apparatus where the flexible wiring board is disposed so that the part formed between the pair of the through-holes contacts the panel.

However, it is an obvious choice of design to make an input apparatus wherein the flexible wiring board is disposed so that the part formed between the pair of the through-holes contacts the panel.

As to claim 4, Toda e. al. teaches an input apparatus wherein wiring terminals are disposed at the end portions of the piezoelectric actuator, the wiring terminals being electrically connected to predetermined electrodes formed on the flexible wiring board (fig. 1, [0018] – [0021]).

As to claim 9, it is an obvious design choice to make an input apparatus wherein the distance between both the end portions of the pair of the through-holes is smaller than the length of the longitudinal direction of the piezoelectric actuator, the width of the pair of the through-holes being larger than the width of the piezoelectric actuator.

As to claim 10, Toda et al. teaches an input apparatus comprising: a display portion for displaying a screen through the panel, wherein when the front surface of the panel is pressed or touched, an operation function item displayed on the display portion is selectively input corresponding to the position that is pressed or touched on the front surface of the panel, and wherein the piezoelectric actuator is disposed outside a display area of the display portion means (fig. 13, [0031]).

As to claim 11, Toda et al. teaches an input apparatus where a plurality of the piezoelectric actuators are disposed around the display area of the display portion (fig. 13, [0031]).

As to claim 12, Toda et al. teaches an input apparatus wherein the panel is a touch panel that is configured to selectively input an operation function item corresponding to the position that is touched, the panel having a display portion for displaying a screen through the touch panel and a holding portion being disposed outside the display area of the display portion and holding the display portion, wherein when an operation function item displayed on the display screen of the display portion is touched, the operation function item corresponding to the position that is touched is selectively input, and wherein the touch panel is moved in the vertical direction against the display surface of the display portion and the flexible wiring board is disposed between the touch panel and the holding portion (fig. 13, [0031], [0012] - [0013]).

Claim 13 rejected the same as claim 11, above.

Response to Arguments

4. Applicant's arguments filed **September 30, 2008** have been fully considered but they are not persuasive.

On the 4th page of Remarks, 4th paragraph, Applicant states, **"Toda fails to disclose or suggest the claimed flexible wiring board that (1) includes a pair of**

through-holes, (2) includes a part formed between the pair of the through-holes and (3) is positioned on the upper surface of a piezoelectric actuator that is configured to bridge the pair of the through-holes in the flexible wiring board."

However, Toda et al. teaches a touch panel comprising a flexible wiring board (fig 13) on which a pattern of predetermined electrodes is formed ([0018] – [0020]); and the piezoelectric actuator ((fig. 1(2)) on the flexible wiring board, wherein the piezoelectric actuator is configured to contact the panel (fog. 13, [0021]). The flexible wiring board of the piezoelectric device of Toda et al. is formed and positioned on the upper surface of the piezoelectric actuator (see fig. 1, 13) little differently, but the flexible printed circuit does not easily peel off from the piezoelectric bodies ([0019] – [0021]) and it is well formed and positioned similar to Applicant's flexible wiring board that was formed using a pair of through-holes.

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AFROZA Y. CHOWDHURY whose telephone number is (571)270-1543. The examiner can normally be reached on 7:30-5:00 EST, 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC
12/20/2008

/Bipin Shalwala/
Supervisory Patent Examiner, Art Unit 2629